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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, BRIAN D

ART UNIT PAPER NUMBER

2661

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,227

Applicant(s)

HAMALAINEN, SEPPO

Examiner

Brian D. Nguyen

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-16 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-30 is/are allowed.
- 6) ☐ Claim(s) 1-3, 7, 10-13 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-6, 14-16, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 11, 20, and 31 are objected to because of the following informalities:

Claim 11, "examining a signal received ... the second communications device" in lines 10-13 is redundant. It is suggested to delete "the second communication device examining ... by the second communication device," in lines 5-9.

Claim 20, line 1, it is suggested to change "The method of claim 11" to --The apparatus of claim 11--.

Claim 31 has the same problem as claim 11.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 7, 10-13, 20, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Varma et al (6,643,322).

Regarding claim 1, Varma discloses method for use by a second communication device (2) in deciding whether to perform link adaptation for communication from a first communication device (1) to a second communication device (see figure 1), the link adaptation resulting in a change in coding or modulation or both (see col. 1, lines 18-22), the method

Art Unit: 2661

comprising the steps of: examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device; recording the first indication of the quality of the signal (see NACK and ACK in col. 2, lines 4-18 and SINR in col. 4, lines 17-23) as received by the second communication device ; providing a second indication of the quality of the signal (see target value(s) (threshold(s)) in figure 4); and deciding to perform link adaptation based on the first and second indication of the quality of the signal (see figure 4 where coding or modulation or both (parameters) are changed based on the first and second indication of the quality of the signal) .

Regarding claim 2, Varma discloses the first indication of the quality of the signal as received by the second communication device is either an SIR estimate (see SINR in col. 4, lines 17-23), or an FER or BLER or corresponding statistic collected over a predetermined time period.

Regarding claim 3, Varma discloses the second indication of the quality of the signal as received by the second communication device is either an SIR target value (see threshold(s) in figure 4 and 50), or a changed SIR target value.

Regarding claim 7, Varma discloses the first communication device is selected from the group consisting of a mobile station and a base station and the second communication device is the other device in the group consisting of the mobile station and the base station (see figure 1 and abstract).

Regarding claim 10, Varma discloses the signal for which the indication of the quality of the signal as received by the second communication device is used as a basis for a link adaptation decision is different from, but associated with, the signal for which the link adaptation

Art Unit: 2661

decision is made (NACK/ACK or SINR is used as a basis for a link adaptation decision is different from, but associated with, the signal for which the link adaptation decision is made).

Regarding claims 11-13 and 20, claims 11-13 and 20 are apparatus claims that have substantially all the limitations of the respective method claims 1-3 and 10. Therefore, they are subject to the same rejection.

Regarding claim 31, claim 31 is a system claim comprising an apparatus as in claim 11. Therefore, it is subject to the same rejection.

Allowable Subject Matter

4. Claims 4-6, 14-16, 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 23-30 are allowed.

Response to Arguments

6. Applicant's arguments filed 1/31/05 have been fully considered but they are not persuasive.

The applicant argued "*the invention as now claimed in claims 1 and 11 requires that a communication device examine a signal, determine an indicator of channel quality from the received signal, and compare the indicator with another indicator. The ACK/NACK signaling taught by Varma as a basis for deciding whether to perform link adaptation has the device receiving a signal send an indicator back to the sender of the signal, which is then compared by*

Art Unit: 2661

the sender with some target. Thus, the entity in Varma deciding to perform link adaptation is not the entity that examines a received signal and so provides an indication of channel quality (i.e. on the basis of having examined the signal), as in the invention as now claimed in claims 1 and 11.” The examiner disagrees because besides deciding whether to perform link adaptation based on ACK/NACK, Varma also decide whether to perform link adaptation based on other factors such as signal to interference + noise signal (see figure 3; col. 1, lines 52-67; col. 4, lines 17-56). In col. 3, lines 46-47, Varma discloses the device 5 of figure 3 can serve as transmitter 1 and/or receiver 2 and in col. 5, lines 48-50, Varma further discloses that this measure (S401) can be generated by a receiving device, a sending device, or both. In case where the measure is generated by the receiving device, then the comparison is performed by the receiving device in steps S403 or S404. Thus, the entity in Varma deciding to perform link adaptation is the entity that examines a received signal and so provides an indication of channel quality as in the claimed invention as now claimed in claims 1 and 11.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2661

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



5/5/05

BRIAN NGUYEN
PRIMARY EXAMINER